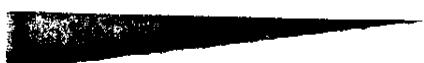


#447

MARINER 10

MARINER/VENUS/MERCURY PLASMA DETAIL TAPE

75-085A-23A, 04N



MARINER 10

MVM PLASMA DETAIL TAPE

73-085A-03A, 04N

THIS DATA SET HAS BEEN RESTORED. THERE WAS ORIGINALLY ONE 9-TRACK, 1600 BPI TAPE, WRITTEN IN BIN. THERE IS ONE RESTORED TAPE. THE DR TAPE IS A 3480 CARTRIDGE AND THE DS TAPE IS 9-TRACK, 6250 BPI. THE ORIGINAL TAPE WAS CREATED ON AN IBM 360 COMPUTER AND WAS RESTORED ON AN IBM 9021 COMPUTER. THE DR AND DS NUMBERS ALONG WITH THE CORRESPONDING D NUMBER AND TIME SPAN IS AS FOLLOWS:

DR#	DS#	DD#	FILES	TIME SPAN
DR005310	DS005310	D031273	3	07/19/76 - 09/03/76

REQ. AGENT
DEW

RAND NO.
RD0384

ACQ. AGENT
WSC

MARINER 10

MARINER/VENUS/MERCURY PLASMA DETAIL TAPE

73-085A-03A, 04N

This data set catalog consists of 1 tape. The 'D' tape is 1600 BPI and the 'C' tape is at 1600 BPI. Both tapes are Binary, 9 track with 3 files of data. The tape was created on an IBM 360 computer.

Time span is as follows:

<u>D#</u>	<u>C#</u>	<u>TIME SPAN</u>
D-31273	C-20624	03/28/74 - 03/17/75

MM PLASMA DETAIL TAPE

DCB = (RECFM=FB,LRECL=312,BLKSIZE=31200,DEN=4), UNIT=6250, IH = R*2
 EQUIVALENCE (DAT(1),IH(1)),IF(1),DAT8(1),IL(1))

<u>Variable</u>	<u>Location</u>	<u>Definition</u>
IH	(1-6)	**Month, day, yr., hr., min, sec.
IF	(4)	**Milliseconds of the day
DAT8	(3)	**Decimal day
DAT	(7-21)	Angle associated with each energy step (degs)
IH	(43-57)	Channeltron counts
IH	(58)	1Data flag
IH	(59)	Space
IH	(60)	2Data flag
IH	(61-70)	Unpacked command and status words
IL	(141-142)	Leading byte of packed cmd and status words
IF	(35-36)	Packed command and status words
DAT	(37-40)	*Temperature halo, core1,core2, moment (deg K)
DAT	(41-44)	*Density halo, core1,core2, moment (particles/cc)
DAT	(45-47)	*Alpha halo, core1,core2, moment (particles/cc)
DAT	(48-50)	*Gamma halo, core1, core2, moment (1/temperature)
DAT	(51-53)	*Residuals in fit halo, core1,core2, moment (ln f ²)
IF	(54)	Spare
DAT	(55-56)	*Be moment (1/temperature)
DAT	(57-59)	*Magnetic vector in solar equatorial (gammas)
DAT	(60)	*Magnetic vector rms (gammas)
DAT8	(31-33)	Spacecraft position vector Au solar equatorial(Au (solar equatorial))
IH	(133-135)	*5, 8, no. of spectrum in halo fit
IH	(136-138)	*lower index, upper index, no. of spectrum in core1 fit
IH	(139-141)	*lower index, upper index, no. of spectrum in core2 fit
IH	(136)	Channel index used in computing core1
IL	(293-307)	Channel count validity (=true)
IL	(308)	Mag. data available flag (=true)
IL	(309-312)	Time validity flags (=true)

* This data not available on the NSSDC data tape.

** Time of the first of the 15 Channeltron Counts.

Footnotes

¹Data flags are:

Flag	Data	Calibrate	Angle	Good		Bad	
				Good	Bad	Good	Bad
1.	X		X				
2.		X	X				
3.			X				
4.		X				X	
5.						X	
6.						X	
7.	Time = 0						
8.	All counts are negative						

²Added to the values defined by footnote 1 are

- 10 = Spectrum is at the negative end of the scan
- 20 = Spectrum is at the positive end of the scan
- 30 = Spectrum crosses 0 angle
- 40 = angle value was bad and the value appearing was interpolated

³Spacecraft velocity vector meaningful only at encounters.

The input MVM plasma data set source was fixed block multi-file tapes as received from Los Alamos. The data was in pseudo time order, i.e., the data within a file was in time order and for the most part the files were in time order. There were, however, instances where files were not in order and duplicate files of data existed. There also existed the condition where a tape would contain small sections of data from many days in the mission. The phase 1 processing algorithm developed single file output tapes (several input to one output). These tapes were subsequently sort/merged based on a decimal day computed based on the input day, month, year and milliseconds of the day. Subsequently it was realized that there was time discrepancies, i.e., data appeared present at a time inconsistent with the experiment data rate of one sample per 6 seconds. This discrepancy was identified to be caused by different time bases, i.e., Experimenter Data Record (EDR) time and Spacecraft Event Time (SET) time (and possibly others). To select a consistent time base for the data, the plasma data set was expanded by merging it with the magnetic field data set. This merger was based on the premise of matching the magnetic field and plasma decimal day and milliseconds of the day to within 10 milliseconds.

When a match was made the magnetic field data was merged into the detail plasma record and the flag IMAG was set true (=1). When there was no match the magnetic fields were set = -999 and the flag set false (=0). A false condition does not necessarily unvalidate a plasma record but simply states that there was no magnetic data match. All the plasma was included on the detail tape. It's up to the user to accept/reject plasma data with IMAG=false.

When performing the merge of the magnetic and plasma records a further check on time was made wherein the year, month, day, hour, minute, seconds and millisecond of the day was checked for validity. In prior processing the assumption was made that the data was valid and no time checks were made. The results of these checks are identified by the array IL. If true (IL=1) the time was good.

DUMP OF TAPE X-434

3/28/74 - 3/16/75

Mariner 10
0-31273

INPUT TAPE X-434 ON MSS3

C-20624

		X-434	ON	MSS3	
1	DATA INPUT	H9	NF	Z	EL 3-1 SR 3-1 SLAST 1
2	FILE	1	RECORD	1	LENGTH 31200 BYTES
3	(	0)	000300C	0044000	00001003 00000006
4	(	4)	C22AE4B	C22AE3E4	C22A1D7E C229B718 C22950B1 C228E4B C228E3E4
5	(	8)	C226EA4B	C226EA4B	00010003 00020000 C000021 0000021 00290029 00710149 C3D90919 00591019 1019FFFF
6	(	12)	0000000	0000000	00000000 00000000 00000000 00000000 00000000 00000000
7	(	160)	40116EE6	41F90269	41F07665 41F35210 4132226 4141901 414550A4 3F529496
8	(	200)	40418005	3476FA6B	4118E900 40000000 00000000 00000000 00000000 00000000
9	(	240)	05619205	9306808P	00104320 556EED6E 00104320 556EED6E 00104320 556EED6E
10	(	280)	00000000	00000000	00000000 00000000 00000000 00000000 00000000 00000000
11	(	320)	00300009	00000000	00000000 00000000 00000000 00000000 00000000 00000000
12	(	360)	C22E2A5	C2238BEE	C22658CB C225265 C2258FF C2252598 C224F32 C22458CB
13	(	400)	0008000C	001E0029	00310049 00590129 04190999 00909119 01101019 00101001
14	(	440)	03070000	00000000	0000005BF 00000000 00000000 00000000 00000000 00000000
15	(	480)	4211012EB	41B9E000	01312939 4144E021A 414FD000 3F51E06A 40219040 41228CATZ
16	(	520)	41189070	3000000	00000000 00000000 00000000 00000000 00000000 00000000
17	(	560)	C03021E	CECF9DB	B79B285 B3940998 00000000 00000000 00000000 00000000
18	(	600)	0000000	1-10101	00000000 00000000 00000000 00000000 00000000 00000000
19	(	640)	4256000B	0000000	02297578 C2200E12 C21FABAC C21F4245 C21E6BDE
20	(	680)	62164245	C21C0F12	C21BA8AC C21B4245 C21ADBD
21	(	720)	00490051	00690129	03390859 05190E19 0F199EFF 00010001 00000000 00000000
22	(	760)	00015EF	0000000	45704B2 451455CA 45152229 45230AC8 461028EA 41EFE225
23	(	800)	C12A0469	414F8835	41498E14 3F592E 4523068 45704959 4511047E 4118E6DC
24	(	840)	0000000	0000000	4138449 02117205 0102344C 46C10BCC 00000000 00000000
25	(	880)	B79B285	B3940998	00000000 00000000 00000000 00000000 00000000 00000000
26	(	920)	C110101T	01010101	01010101 00000000 00000000 00000000 00000000 00000000
27	(	960)	C21A445E	C219E3F8	C219292 C219122B L21B80C5 C21845E
28	(	1000)	C16445E	C215702	C2151720 C21480C5 00000002 00000002 00000002 00000002 00000002 00000002
29	(	1040)	04190919	0C999F99	1119FFFF 00010031 00000000 00000000 00000000 00000000
30	(	1080)	452F9AFC	45152612	45154A3 451E1-E6 4102548D 41E635E 411E23A2 4211B3A C12D8B89 414EE8C3
31	(	1120)	414E4ADC	3F5AED5B	40224A10 4022102C 4079B8C1 4016G776 4120AED 00000000 00000000 00000000
32	(	1160)	41796E76	C1653F73	40721538 C060643E 4EABEBE4 C05302F1E CECFC9DB B79B285 B3940998
33	(	1200)	0000000	0000000	00000000 00000000 00000000 00000000 00000000 00000000
34	(	1240)	01010101	00000000	0303001C 004A3000 0000001B 00000000 00000000 00000000
35	(	1280)	C2139A40	C21333D9	C2120D73 C212670C C21200A5 C2119A40 C21133D9 C210C073 C21000A6
36	(	1320)	C1F9A400	C1F33D9A	C1EC0734 00010001 0004300A 0004300A 0004300A 0004300A 0004300A 0004300A
37	(	1360)	1119FFF	00010001	03000000 00000000 00000505 03070000 00000000 00000000
38	(	1400)	45153E8	451F5C6A	40721538 41107234 4022225D 4022225D 4022225D 4022225D
39	(	1440)	40222235	4022225D	4022225D 4022225D 4022225D 4022225D 4022225D 4022225D
40	(	1480)	C1F31E8C	4118930	0060043E 4EABEBE4 C0302F1E CECFC9DB B79B285 B3940998 00000000 00000000
41	(	1520)	0000000	0000000	00000000 00000000 00000000 00000000 00000000 00000000
42	(	1560)	0003001C	0004A0000	00000000 00000000 00000000 00000000 00000000 00000000
43	(	1600)	C1CEB8E5	C1CEB8E5	00000000 00000000 00000000 00000000 00000000 00000000
44	(	1640)	C18E88E5	00000002	00000000 00000000 00000000 00000000 00000000 00000000
45	(	1680)	00000000	00000505	03070000 00000000 00000000 00000000 00000000 00000000
46	(	1720)	411C1A83	421183E5	42123F83 42119557 01286178 414F2A69 41506020 3F59EAF9 401FB12B C116E104
47	(	1760)	45812DAA	3FBET45A	411A856C 00000000 00000000 00000000 00000000 00000000
48	(	1800)	C06D043E	4EABEBE4	00000000 00000000 00000000 00000000 00000000 00000000
49	(	1840)	00000000	00000000	00000000 00000000 00000000 00000000 00000000 00000000
50	(	1880)	00000027	0000099A5	4256001D 00000000 00000000 00000000 00000000 00000000
51	(	1920)	C163B6EE	C15D5Q88	C15EAE21 C15D83BB C14A1D55 C143B6EE C13D5872 C136EA21 C13C83BB 00010000
52	(	1950)	00000000	0001300E	00310049 00810179 05B94999 10191299 1299FFFF 00010001 00000000 00000000
53	(	2000)	03070000	00000000	00000000 00000000 00000000 00000000 00000000 00000000
54	(	2040)	42126892	4211582	00000000 00000000 00000000 00000000 00000000 00000000
55	(	2080)	411BE606	00000000	00000000 00000000 00000000 00000000 00000000 00000000
56	(	2120)	C0302F1E	CECF9DB	B79B285 B3940998 00000000 00000000 00000000 00000000
57	(	2160)	00000003	01010101	01010101 01010101 01010101 01010101 01010101 01010101
58	(	2200)	42560022	00000000	00000000 00000000 00000000 00000000 00000000 00000000
59	(	2240)	40BC7790	41122BDF	41194945 411EFAAC 41256113 4123C779 41322BDF 00000001 0007000A 00163029
60	(2280)	00000004	00000000	00000000 00000000 00000000 00000000 00000000 00000000

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